CLAIMS

We claim:

1. A sanitary, disposable dispensing assembly for providing reconstituted food and beverage by combining a diluent with a food and beverage concentrate, the dispensing assembly comprising:

a dispense spout having an internal surface defining a continuous internal throughbore running through a horizontal portion, and a vertical portion joined by an elbow portion, the vertical portion having an outlet for the reconstituted food and beverage and a plurality of ribs running axially along the internal surface thereof, the elbow portion having a vent opening communicating the throughbore with outside atmosphere and the horizontal portion having a vertical passageway formed with an upper opening and a lower opening, the vertical passageway intersecting the throughbore; and

a body having an internal surface defining an internal bore formed therethrough, a diluent inlet for providing diluent flow along a horizontal path of the internal bore, a concentrate inlet having a vertical throughway in communication with the internal bore, the body having an open end opposite the diluent inlet for slidably receiving in a linear motion the horizontal portion of the dispense spout between a closed position wherein the vertical throughway is out of alignment with the vertical passageway and the throughbore of the dispense spout, and an open position wherein the vertical throughway is aligned with the vertical passageway and the throughbore, the vertical passageway and the throughbore defining a mixing chamber for the diluent and the concentrate.

2. The dispensing assembly of claim 1, including a guiding arrangement in the dispense spout and the body for slidably moving the dispense spout along a predetermined linear path relative to the body.

3. The dispensing assembly of claim 2, wherein the guiding arrangement includes resilient, deformable lock tab structure protruding outwardly from an external surface of the dispense spout, and horizontally extending key slot structure provided internally on the body, the key slot structure having enlarged end segments connected by a narrow channel, the key slot structure slidably receiving the lock tab structure.

4. The dispensing assembly of claim 1, including a plurality of sealing beads extending circumferentially around the external surface of the dispense spout in the horizontal portion thereof, the sealing beads being sealingly engaged with the internal surface of the body.

5. The dispensing assembly of claim 1, wherein the diluent inlet is formed with a hexagonally-shaped recess adapted to mate with a hexagonal head of a diluent nozzle mounted on a food and beverage dispenser.

6. The dispensing assembly of claim 1, wherein the upper opening of the vertical passageway in the dispense spout has a diameter which is larger than the diameter of the lower opening.

7. The dispensing assembly of claim 1, wherein the throughbore of the dispense spout increases in size from the horizontal portion to the vertical portion.

8. The dispensing assembly of claim 1, wherein the concentrate inlet is positioned either upwardly or downwardly when the body is cooperatively engaged with the dispense spout.

9. The dispensing assembly of claim 1, wherein the concentrate inlet on the dispense spout is adapted to be connected to a concentrate vessel positioned

above the dispense spout and having a delivery conduit engaged with a concentrate pump mounted on a food and beverage dispenser.

10. The dispensing assembly of claim 1, wherein the concentrate inlet is adapted to be connected to a concentrate vessel located beneath the dispense spout and having a delivery conduit independent of a concentrate pump on a food and beverage dispenser.

11. The dispensing assembly of claim 1, wherein the internal surface of the dispense spout is formed with a flow-diverting deflector adjacent the vent opening.

12. In a dispensing assembly for producing reconstituted consumable liquids by combining and mixing a diluent and a liquid concentrate supplied through a delivery conduit from a concentrate vessel provided on a food and beverage dispenser, the dispensing assembly having an inner member movable within an outer member provided with a concentrate inlet between a closed position in which the concentrate inlet is sealed, and an open position in which the concentrate inlet communicates with the interior of the dispensing assembly to deliver a reconstituted mixture of diluent and liquid concentrate in a flow path to a mixture outlet, the improvement comprising:

a vent arrangement formed in the inner member for communicating the interior of the dispensing assembly with the atmosphere outside the dispensing assembly, and enabling the draining of a maximum amount of the reconstituted mixture through the mixture outlet.

13. The improvement of claim 12, including a guiding arrangement between the inner member and the outer member for enabling sliding movement of the inner member relative to the outer member along a predetermined linear horizontal path.

14. The improvement of claim 12, including a rib arrangement provided in the inner member for improving mixing of the combined diluent and liquid concentrate, and preventing dispersion of the reconstituted mixture from the mixture outlet.

15. The improvement of claim 12, wherein the dispenser is provided with a bracket structure for slidably receiving and retaining an end of the concentrate vessel.

16. The improvement of claim 12, wherein the inner member is formed with a vertical passageway alignable with the concentrate inlet, the concentrate inlet being positioned and the vertical passageway being sized such that diluent flowing past the vertical passageway causes liquid concentrate to be suctioned from the concentrate vessel when the concentrate vessel is located beneath the dispensing assembly.

17. The improvement of claim 16, wherein the delivery conduit is provided with a pinch valve for regulating the flow of liquid concentrate from the concentrate vessel to the dispensing assembly.

18. The improvement of claim 12, including locating structure on the inner member and the outer member for internally and externally locating the dispensing assembly relative to a diluent nozzle mounted on the dispenser.

19. The improvement of claim 18, wherein the inner member is sealingly engaged with the diluent nozzle when the dispensing assembly is in the open position.

20. The improvement of claim 12, wherein the inner member is formed with a deflector adjacent the vent opening for diverting mixture flow therefrom.

21. The improvement of claim 12, wherein the liquid concentrate is pure and preservative-free.

22. The improvement of claim 12, wherein the reconstituted mixture is substantially contaminant free.